

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 16 JAN 2006

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Applicant's or agent's file reference 2004008613	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US05/02623	International filing date (day/month/year) 31 January 2005 (31.01.2005)	Priority date (day/month/year) 29 January 2004 (29.01.2004)
International Patent Classification (IPC) or national classification and IPC IPC(7): G06F 9/00 and US Cl.: 713/100		
Applicant HILDEBRAND, JOHN G.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>    </u> sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 22 September 2005 (22.09.2005)	Date of completion of this report 06 January 2006 (06.01.2006)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/ US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Ayaz R Sheikh Telephone No. 571-272-2100	

Form PCT/IPEA/409 (cover sheet)(July 1998)

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US05/02623

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed.
- ☒ the description:  
 pages 1-8 as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages 9-12 as originally filed  
 pages NONE, as amended (together with any statement) under Article 19  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
 pages 1 as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages NONE, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of: —

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/fig NONE

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/US05/02623

## V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. STATEMENT

Novelty (N)

Claims 2, 7-12 and 23-25 YES

Claims 1, 3-6, 13-22 and 26 NO

Inventive Step (IS)

Claims NONE YES

Claims 1-28 NO

Industrial Applicability (IA)

Claims 1-28 YES

Claims NONE NO

### 2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/US05/02623

**Supplemental Box**  
(To be used when the space in any of the preceding boxes is not sufficient)

**V. 2. Citations and Explanations:**

Claims 1, 3-6, 13-22, and 26 lack novelty under PCT Article 33(2) as being anticipated by Vince (U.S. Patent Publication No. 2002/0075954 A1).

Regarding claim 1, Vince teaches a method of supporting operation of legacy customer equipment in a system where at least a portion of the legacy customer equipment receives non-supported signals (figure 1), the method comprising:  
configuring a transcoding unit for operation with the legacy customer equipment (figure 2, reference number 10), the transcoding unit configured to transcode non-supported signals to supported signals which are compatible with the customer equipment (paragraph 0018).

Regarding claim 3, Vince teaches a method of transcoding dissimilar payloads carried in a first transport stream, the method comprising:  
demultiplexing the first transport stream to recover first and second payloads (figure 1, reference number 30);  
transcoding the second payload to a protocol associated with the first payload if a protocol associated with the second payload is dissimilar from the protocol associated with the first payload (figure 1, reference number 40/50/60); and  
multiplexing the first payload and the transcoded second payload to a second transport stream (figure 1, reference number 70).

Regarding claim 4, Vince teaches further comprising associating the first payload with MPEG-2 protocols and associating the second payload with AVC protocols such the second payload is transcoded to MPEG-2 protocols (paragraph 0001 and 0031).

Regarding claim 5, Vince teaches further comprising associating the AVC protocols with MPEG-4 protocols (paragraph 0027).

Regarding claim 6, Vince teaches further comprising associating the AVC protocols with H.264 protocols (paragraph 0027).

Regarding claim 13, Vince teaches further comprising associating the first transport stream with MPEG-2 protocols (paragraph 0003).

Regarding claim 14, Vince teaches further comprising determining if the protocol associated with the second payload is dissimilar from the protocol associated with the first payload as a function of instructions associated with the MPEG-2 protocols of the first transport stream (paragraph 0018).

Regarding claim 15, Vince teaches further comprising associating the first and second transport streams with MPEG-2 protocols (paragraph 0029).

Regarding claim 16, Vince teaches a system of providing digital television signals to a media output device, the system comprising:  
a host configured to decode signals carried in payloads of a first payload type for playback on the media output device (paragraph 0002/0003); and  
a unit configured for transcoding digital television signals carried in payloads of a second payload type to the first payload type for output to the host, the second payload type being associated with protocols dissimilar to protocols associated with the first payload type (paragraph 0018).

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/US05/02623

## Supplemental Box

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Regarding claim 17, Vince teaches wherein the host is configured to only decode signals carried in the first payload type (paragraph 0029).

Regarding claim 18, Vince teaches wherein the first payload type is associated with MPEG-2 protocols (paragraph 0003).

Regarding claim 19, Vince teaches further comprising a provider for providing the signals in a first transport stream, wherein the first transport stream carries the signals in payloads of the first and second payload types (paragraph 0004).

Regarding claim 20, Vince teaches wherein the unit includes a demultiplexer for demultiplexing the first transport stream to recover the payloads (figure 1, reference number 30); a transcoder for transcoding the second payload type to the first payload type (figure 1, reference number 10); and a multiplexer for multiplexing payloads of the first payload type with transcoded payloads of the second payload type to a second transport stream for output to the host (figure 1, reference number 70).

Regarding claim 21, Vince teaches wherein the unit includes a bypass for bypassing payloads associated with the first payload type past the transcoder to the multiplexer such that the bypassed payloads are multiplexed at the multiplexer with the transcoded payloads (figure 1, reference number 82 and 84).

Regarding claim 22, Vince teaches wherein the transcoder only transcodes payloads from the second payload type to the first payload type (paragraph 0018).

Regarding claim 26, Vince teaches a transcoding unit for use with legacy set top boxes (STBs) which only supports playback of digital television (DTV) signals encoded according to non-advance video compression (AVC) standards and not DTV signals encoded according to AVC standards (paragraph 0002-0004), the transcoding unit comprising:  
a transcoder configured to transcode DTV signals associated with the AVC standards to DTV signals associated with non-AVC standards so as to permit playback of the transcoded DTV signals with the legacy STB (paragraph 0018).

Claims 2, 7-12, 23-25, 27, and 28 lack an inventive step under PCT Article 33(3) as being obvious over Vince (U.S. Patent Publication No. 2002/0075954 A1) in view of Unger et al. (U.S. Patent Publication No. 2002/0196939 A1).

Regarding claim 2, Vince teaches all the limitations of claim 1, above. However, Vince does not teach wherein the legacy customer equipment are set top boxes (STBs) having onboard conditional access decryption capabilities and wherein the method further comprises configuring the transcoding unit to interface through a card interface of the STBs.

Unger et al. teaches wherein the legacy customer equipment are set top boxes (STBs) having onboard conditional access decryption capabilities (figure 2, reference number 36) and wherein the method further comprises configuring the transcoding unit to interface through a card interface of the STBs (paragraph 0039).

Regarding claim 7, Vince teaches all the limitations of claim 3, above. However, Vince does not teach further comprising decrypting conditional access (CA) encryption of the first transport stream prior to demultiplexing.

Unger et al. teaches further comprising decrypting conditional access (CA) encryption of the first transport stream prior to demultiplexing (figure 2, reference number 40).

Regarding claim 8, Vince as modified by Unger et al. teaches further comprising decrypting the CA encryption of the first transport stream in a set top box (STB) (see figure 2; reference number 40 within 36 of Unger et al.).

Regarding claim 9, Vince as modified by Unger et al. teaches further comprising demultiplexing, transcoding, and multiplexing the first and second payloads in a card inserted into a card slot of the STB (see paragraph 0039 of Unger et al. and figure 2 of Vince).

Regarding claim 10, Vince as modified by Unger et al. teaches further comprising decoding copy protection of the first transport stream in the card and prior to the demultiplexing, transcoding, and multiplexing (see figure 11, reference number 604 of Unger et al.).

Regarding claim 11, Vince as modified by Unger et al. teaches further comprising encoding copy protection to the second transport stream (see paragraph 0008 of Unger et al.).

Regarding claim 12, Vince as modified by Unger et al. teaches further comprising transmitting the copy protection encoded second transport stream from the card to the STB (see paragraph 0008 of Unger et al.).

Regarding claim 23, Vince teaches all the limitations of claim 16, above. However, Vince does not teach wherein the host is a set top

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/US05/02623

**Supplemental Box**  
(To be used when the space in any of the preceding boxes is not sufficient)

box (STB).

Unger et al. teaches wherein the host is a set top box (STB) (figure 2, reference number 36).

Regarding claim 24, Vince as modified by Unger et al. teaches wherein the unit is a card configured to insert within a slot of the STB (see paragraph 0039 of Unger et al.).

Regarding claim 25, Vince teaches all the limitations of claim 16, above. However, Vince does not teach wherein the host is a digital video recorder (DVR).

Unger et al. teaches wherein the host is a digital video recorder (DVR) (figure 12, reference number 704).

Regarding claim 27, Vince teaches all the limitation of claim 26, above. However, Vince does not teach wherein the transcoder is included with a card configured to insert within a slot of the legacy STBs and wherein the STB includes onboard conditional access decryption capabilities.

Unger et al. teaches wherein the transcoder is included with a card configured to insert within a slot of the legacy STBs and wherein the STB includes onboard conditional access decryption capabilities (figure 2, reference number 40 and paragraph 0039).

Regarding claim 28, Vince as modified by Unger et al. teaches wherein the DTV signals are carried in payloads of a first transport stream (see figure 2, reference number 100' of Vince), and wherein the transcoding unit further comprising a demultiplexer for determining whether the first transport stream includes payloads associated with the AVC standards or the non-AVC standards and to transport payloads associated with the AVC standards to the transcoder and to transport payloads associated with the non-AVC standards to a multiplexer (see figure 1, reference number 30 of Vince), wherein the transcoder transcodes the payloads associated with the AVC standards to payloads associated with the non-AVC standards and outputs the transcoded payloads the multiplexer (see figure 2, reference number 120 of Vince), and wherein the multiplexer combines the bypassed payloads with the transcoded payloads to a second transport stream for output to the legacy STB (see figure 1, reference number 70 of Vince).

Claims 1-28 meet the criteria set out in PCT Article 33(4) and thus have industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----